

(FILE 'HOME' ENTERED AT 10:52:29 ON 25 SEP 2001)

FILE 'REGISTRY' ENTERED AT 10:52:32 ON 25 SEP 2001
ACT QAZI714663S/Q

L1 STR

L2 26 S L1
L3 STR L1
L4 1 S L3
L5 81 S L3 FULL
SAVE L5 QAZI714663A/A

FILE 'HCAPLUS' ENTERED AT 10:59:11 ON 25 SEP 2001
L6 770 S L5

FILE 'REGISTRY' ENTERED AT 11:55:34 ON 25 SEP 2001

FILE 'LREGISTRY' ENTERED AT 11:55:45 ON 25 SEP 2001
ACT QAZI714663S/Q

L7 STR

L8 STR L1

FILE 'REGISTRY' ENTERED AT 12:06:39 ON 25 SEP 2001
ACT QAZI714663A/A

L9 STR
L10 81 SEA FILE=REGISTRY SSS FUL L9

L11 78 S L8 SSS SUB=L10 FULL
L12 STR L9
L13 STR L8
L14 16 S L13

FILE 'REGISTRY' ENTERED AT 12:55:31 ON 25 SEP 2001
L15 72 S L13 SSS SUB=L10 FULL
SAVE L13 QAZIY14663S2/Q
L16 6 S L11 NOT L15

FILE 'HCAPLUS' ENTERED AT 13:42:03 ON 25 SEP 2001
L17 769 S L11
L18 7 S L17 AND HAIR
L19 0 S L18 AND PERMANENT?
L20 0 S L18 AND DEFORM?
L21 11 S L17 AND (HAIR? OR CURL? OR PERMANENT OR SHAMPOO OR CONDITIONE
L22 1 S L17 AND COSMETIC
L23 11 S L21 OR L22

FILE 'REGISTRY' ENTERED AT 13:57:25 ON 25 SEP 2001
L24 1 S METHANESULFINIC ACID/CN
L25 19 S METHANESULFINIC ACID AND "METHYLAMINO"
L26 4 S L25 AND "IMINO"
E METHANESULFINIC ACID, IMINO (PROPYLAMINO)/CN
L27 1 S E4

Searched by Paul Schulwitz

Broad Structure Search

78 compounds
found in the
Registry File

769 References are
associated with
these Structures

We associ-
ated these
refs. with
Hair Products

to narrow
to 11.

If you would like
to see more references
Please contact
Paul Schulwitz
or
Susan Hanley

L28 E METHANESULFINIC ACID, (DIMETHYLAMINO) IMINO/CN
 1 S E4
 L29 E METHANESULFINIC ACID, (DIETHYLAMINO) IMINO/CN
 1 S E4
 L30 E METHANESULFINIC ACID, (ETHYLAMINO) (ETHYLIMINO) -/CN
 1 S E3
 L31 E METHANESULFINIC ACID, (METHYLAMINO) (METHYLIMINO) -/CN
 1 S E3
 L32 E METHANESULFINIC ACID, (BUTYLAMINO) (BUTYLIMINO) -/CN
 1 S E3
 L33 E METHANESULFINIC ACID, (PHENYLAMINO) (PHENYLIMINO) -/CN
 1 S E3
 E METHANESULFINIC ACID, (PHENYLMETHYLAMINO) (PHENYLMETHYLIMINO) -
 E C15H16N2O2S/MF
 L34 522 S E3 AND 2/NRS
 L35 351 S L34 AND 2/NR
 L36 2 S L34 AND "METHANESULFINIC ACID"/CNS
 E METHANESULFINIC ACID, [(PHENYLMETHYL)AMINO] [(PHENYLMETHYL)IMI
 L37 1 S 55152-76-6/RN
 E METHANESULFINIC ACID, (CARBOXYMETHYLAMINO) IMINO-/CN
 L38 1 S "METHYLSULFINIC ACID"/CNS
 L39 0 S "METHYANESULFINIC ACID"/CNS
 L40 854 S "METHANESULFINIC ACID"/CNS
 L41 0 S "CARBOXYMETHYL" AND L40
 E CARBOXYMETHYL/CN
 L42 1 S E3
 E C3H5N2O4S/MF
 L43 2 S E3
 E C3H6N2O4S/MF
 L44 13 S E3
 L45 0 S L40 AND L44
 L46 0 S L44 AND "CARBOXYMETHYL"
 L47 0 S L44 AND 0/NR
 L48 0 S L44 AND NR<1
 L49 6 S L44 AND NR<2
 L50 0 S L40 AND CARBOXYMETHYL/CNS
 L51 0 S L40 AND "CARBOXYMETHYL"
 L52 0 S L40 AND "CARBOXYETHYL"
 L53 0 S L40 AND "CARBOXYPENTYL"
 L54 0 S L40 AND "CARBOXY"
 L55 62 S L40 AND "HYDROXY"
 L56 0 S L40 AND "HYDROXYMETHYLAMINO"
 L57 7 S L40 AND "HYDROXYMETHYL"
 L58 2 S L57 AND "IMINO"
 L59 1 S 27395-34-2/RN
 E METHANESULFINIC ACID, (2-AMINOETHYL)/CN
 E C3H9N3O2S/MF
 L60 5 S E3
 E METHANESULFINIC ACID, IMINO (SULPH)/CN
 E METHANESULFINIC ACID, (SULPH)/CN
 E METHANESULFINIC ACID, (SULF)/CN
 E METHANESULFINIC ACID, (2-SULF)/CN
 E METHANESULFINIC ACID, (2-PHOS)/CN
 E METHANESULFINIC ACID, IMINO/CN
 E METHANESULFINIC ACID, IMINO (SULF)/CN
 E METHANESULFINIC ACID, IMINO (SULF)/CN
 E METHANESULFINIC ACID, IMINO (2-SULF)/CN

L61 4 S L40 AND "PHOSPHON"
 L62 14 S L40 AND "SULF"
 L63 0 S L40 AND "SULPH"
 L64 134 S L40 AND "SULFONYL"
 L65 0 S L40 AND "SULFONYLMETHYL"
 L66 0 S L40 AND "SULFONYLPROPYL"
 L67 0 S L40 AND "PHOSPHONYL"
 L68 6 S L40 AND "PHENYLAMINO"
 L69 0 S L68 AND "METHOXY"
 L70 3 S L68 AND "IMINO"
 L71 1 S 14451-43-5/RN
 L72 0 S L40 AND "PHENYLAMINO" AND "METHYL"
 L73 10 S L40 AND "HYDROXYPHENYL"
 L74 0 S L40 AND "HYDROXYPHENYLAMINO"
 L75 2 S L40 AND "HYDROXYPHENYL" AND "AMINO" AND "IMINO"
 L76 1 S 146886-04-6/RN
 L77 8 S L40 AND "PHENYL" AND "AMINO" AND "METHYL" AND "IMINO"
 L78 1 S L77 AND "4-METHYL"
 L79 1 S 38716-58-4/RN
 L80 0 S L40 AND "PHENYL" AND "4-METHOXY" AND "AMINO" AND "IMINO"
 L81 0 S L40 AND "PHENYL" AND "METHOXY" AND "AMINO" AND "IMINO"
 L82 4 S L40 AND "PHENYL" AND "4-METHOXY"
 L83 0 S L40 AND "PHENYL" AND "2-CHLORO" AND "AMINO" AND "IMINO"
 L84 5 S L40 AND "PYRID" AND "METHYL" AND "AMINO" AND "IMINO"
 L85 1 S 22462-88-0/RN
 L86 1 S 22462-66-4/RN
 L87 1 S 22462-65-3/RN
 L88 0 S L40 AND "QUINO" AND "AMINO" AND "IMINO"
 L89 1 S 98548-10-8/RN
 L90 1 S 98337-86-1/RN
 L91 2 S L40 AND "AMINOIMINOMETHYL"
 L92 1 S 34619-81-3/RN
 L93 20 S L26 OR L27 OR L28 OR L29 OR L30 OR L31 OR L32 OR L33 OR L37 O
 L94 4 S L40 AND "IMINO" AND "METHYLAMINO"
 L95 1 S 108249-21-4/RN
 L96 19 S L95 OR L27 OR L28 OR L29 OR L30 OR L31 OR L32 OR L33 OR L37 O
 SAVE L96 EXAMPLES/A
 L97 3 S L40 AND "QUINOLYL"
 L98 1 S 22462-68-6/RN
 L99 1 S 22462-67-5/RN
 L100 21 S L96 OR L98 OR L99

→ 21 of the 31 substances listed in Claim 3 were found in Registry

FILE 'CAPLUS' ENTERED AT 15:54:25 ON 25 SEP 2001

L101 16 S L100

16 References were associated with these compounds in HCAPLUS.

FILE 'CAOLD' ENTERED AT 15:55:08 ON 25 SEP 2001

L102 4 S L100
SEL AN L102 1-4

FILE 'HCAPLUS' ENTERED AT 16:06:21 ON 25 SEP 2001

L103 0 S E1-E4

4 Refs. " " " "

FILE 'CAPLUS' ENTERED AT 16:06:45 ON 25 SEP 2001

L104 0 S E1-E4

in CAOLD

FILE 'CAOLD' ENTERED AT 16:20:39 ON 25 SEP 2001

SEL AN L102 1-4

Qazi 09/714,663

FILE 'HCAPLUS' ENTERED AT 16:21:11 ON 25 SEP 2001
L105 7 S E1-E4/OREF OR E5-E8/OREF
L106 7 S E1-E4/OREF

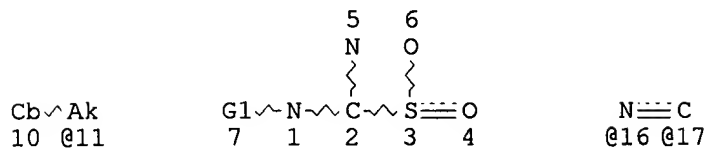
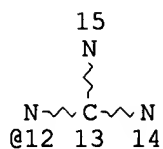
⇒ Abstracts for the CAOLD References.

Qazi 09/714,663

STR

L8 HAS NO ANSWERS

L8 STR



VAR G1=9/11/12/16/17/N/H/AK/CY

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 6

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 10

DEFAULT ECLEVEL IS LIMITED

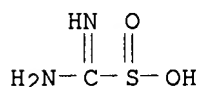
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

L23 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2001 ACS
 AN 2000:555427 HCAPLUS
 DN 134:102487
 TI Update on low sulfide systems
 AU Christner, Jurgen
 CS TFL USA/Canada Inc., Greensboro, NC, 27410-8107, USA
 SO J. Am. Leather Chem. Assoc. (2000), 95(5), 163-169
 CODEN: JALCAQ; ISSN: 0002-9726
 PB American Leather Chemists Association
 DT Journal
 LA English
 AB A low sulfide system that included sodium sulfide, thiourea dioxide, lime, and caustic soda was used to remove **hair** from fresh hides. The low sulfide system showed a significant redn. of hydrogen sulfide emissions compared to traditional methods. Along with the redn. in toxic gases, the low sulfide system helps control swelling, enhances removal of fat, improves cleanliness, and reduces wrinkles.
 IT **1758-73-2**, Thiourea dioxide
 RL: TEM (Technical or engineered material use); USES (Uses)
 (low sulfide systems for unhairing of hide)
 RN 1758-73-2 HCAPLUS
 CN Methanesulfinic acid, aminoimino- (8CI, 9CI) (CA INDEX NAME)

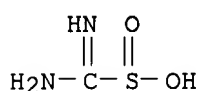


RE.CNT 15
 RE
 (2) Bailey, D; JALCA 1982, V77, P476 HCAPLUS
 (3) Christner, J; JALCA 1988, V83, P183 HCAPLUS
 (8) Hahn, F; Leder 1967, V18, P184 HCAPLUS
 (9) Knafllic, F; Leder 1972, V23, P157 HCAPLUS
 (10) Lassen, K; Leder 1968, V19, P268 HCAPLUS
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2001 ACS
 AN 1999:573984 HCAPLUS
 DN 131:175633
 TI Pattern formation and symmetry-breaking bifurcations fueled by dissipation of chemical energy: a possible model for morphogenesis
 AU Simoyi, Reuben H.
 CS Center for Nonlinear Science and the Chemistry Department, West Virginia University, Morgantown, WV, 26506-6045, USA
 SO Pure Appl. Chem. (1999), 71(6), 1007-1017
 CODEN: PACHAS; ISSN: 0033-4545
 PB Blackwell Science Ltd.
 DT Journal
 LA English
 AB A soln. contg. a reacting, autocatalytic and bistable chem. system can spontaneously form patterns and structure from erstwhile homogeneous aq. reaction solns. Among some of the patterns formed are concentric rings and thermal plumes. The exothermic chem. reaction fuels the

pattern-formation through a coupling of Marangoni and Rayleigh-Benard-type thermogravitational effects. The thermogravitational effects arise from multicomponent convection which fuels the formation of salt fingers. These fingers later **curl** upwards to form thermal plumes. The concentric patterns result from the formation of a complete convective torus. The formation a series of stationary convective tori suggest that there is a possibility of other mechanisms in soln. which can form Turing-like patterns.

IT 1758-73-2, Aminoiminomethanesulfinic acid
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process)
 (pattern formation and symmetry-breaking bifurcations fueled by dissipation of chem. energy as possible model for morphogenesis)
 RN 1758-73-2 HCAPLUS
 CN Methanesulfinic acid, aminoimino- (8CI, 9CI) (CA INDEX NAME)



RE.CNT 27

RE

- (1) Char, M; J Phys D Appl Phys 1994, V27, P748 HCAPLUS
 - (2) Chinake, C; J Phys Chem 1993, V97, P11569 HCAPLUS
 - (4) Chinake, C; J Phys Chem 1994, V98, P2908 HCAPLUS
 - (5) Chinake, C; J Phys Chem 1994, V98, P4012 HCAPLUS
 - (7) Epstein, I; J Phys Chem 1992, V96, P5852 HCAPLUS
- ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2001 ACS

AN 1994:460188 HCAPLUS

DN 121:60188

TI Liming skins and hides using proteolytic enzymes

IN Christner, Juergen; Taeger, Tilman; Wick, Gertrud

PA Roehm GmbH, Germany

SO Eur. Pat. Appl., 9 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 575927	A2	19931229	EP 1993-109846	19930621
	EP 575927	A3	19940209		
	EP 575927	B1	19960828		
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE				
	DE 4220838	A1	19940105	DE 1992-4220838	19920625
	AT 141959	E	19960915	AT 1993-109846	19930621
	ES 2091523	T3	19961101	ES 1993-109846	19930621
	BR 9302644	A	19940111	BR 1993-2644	19930624
	JP 06057300	A2	19940301	JP 1993-153408	19930624
	US 5508195	A	19960416	US 1995-533674	19950926
PRAI	DE 1992-4220838		19920625		
	US 1993-80969		19930622		

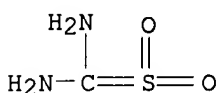
US 1995-395299 19950227

AB Hides and skins are limed in an aq. alk. lime bath (pH 10.0-14.0) contg. thiourea dioxide (I) and alk. proteinase (II) having elastase activity. Thus, 1 ton salted cow hides was limed in a bath contg. water (26.degree.) 150.0, lime 3.5, I 0.8, and II (from Bacillus alcalophilus, optimum pH 10.0-13.0, 4000 LVE units, elastase value 6.4) 0.3% (based on hide wt.) by agitating until the hide was largely **hair**-free, adding 0.2% NaOH, agitating for 30 min, treating for 18 h (1 min agitation and 59 min rest each h), draining, and washing with water. The **hair** was less destroyed by this process than by the customary lime/sulfide liming.

IT **4189-44-0**, Thiourea dioxide
RL: USES (Uses)
(hide liming in baths contg. proteinase and)

RN 4189-44-0 HCAPLUS

CN Thiourea, S,S-dioxide (9CI) (CA INDEX NAME)



L23 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2001 ACS

AN 1991:519826 HCAPLUS

DN 115:119826

TI Oxidative **hair** dyes containing aminophenols

IN Zimnicki, Jan; Zaremba, Zdzislaw; Kulawinek, Jan; Szlubowska, Wiktoria

PA Osrodek Badawczo-Rozwojowy Przemyslu Barwnikow "Organika", Pol.

SO Pol., 12 pp. Abstracted and indexed from the unexamined application.
CODEN: POXXA7

DT Patent

LA Polish

FAN.CNT 1

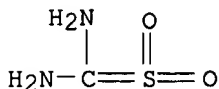
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	PL 152511	B2	19910131	PL 1989-277192	19890112

AB The title dyes contain aminophenols, and polyphenols or naphthols dissolved in a **shampoo** or in a detergent soln. contg. sugars (e.g. glucose) and/or org. sulfates at a temp. .gtoreq.10.degree., and pH is adjusted to 5-9. The ratio of dyes to remaining components is (0.5-2):(98-99.5), resp., and stabilizer content is 0.05-0.5 wt. %. A **shampoo** for dyeing **hair** blonde with golden tints contained p-aminophenol.cntdot.HCl 2, o-phenylenediamine 0.4, formylhydroxysulfonate Na salt 0.3, and glucose 0.3 parts, and conventional ingredients.

IT **4189-44-0**, Thiourea dioxide
RL: BIOL (Biological study)
(oxidative **hair** dye **shampoos** contg. aminophenols and)

RN 4189-44-0 HCAPLUS

CN Thiourea, S,S-dioxide (9CI) (CA INDEX NAME)



L23 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2001 ACS

AN 1990:603083 HCAPLUS

DN 113:203083

TI Imparting **permanent** electrically conductive properties to planar products made of synthetic fibers

IN Okoniewski, Marian; Michalska, Antonina; Grygielewicz, Jerzy; Witczak, Stefan

PA Instytut Wlokiennictwa, Pol.

SO Pol., 2 pp.

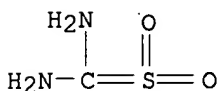
CODEN: POXXA7

DT Patent

LA Polish

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	PL 137223	B1	19860531	PL 1983-242520	19830613
AB	The method is based on formation on the fibers, esp. polyacrylonitrile fibers contg. groups able to bond metal ions coordinatively, of semiconductive Cu or Ag sulfides by application of Cu and Ag aq. solns. and reducing agents which are simultaneously donors of S ²⁻ . Solns. contg. 50-300 g/dm ³ of the reducing agent and 50-400 g/dm ³ of the hydrotropic agent are deposited on the planar product in the amt. of 25-300% of the product mass. The deposition is done, e.g., by printing or spraying. After drying, a soln. contg. 25-300 g/dm ³ of Cu or Ag compds. is deposited. The product is dried at .ltoreq.100.degree. and treated by hot air or a hot air/H ₂ O vapor mixt. for 10 s-1 h. An addnl. deposition of 0-5 wt.% of typical condensing agents is suggested. Na ₂ S ₂ O ₃ , thiourea, thiourea dioxide, or thioacetamide is used as the reducing agent. Simple salts of Ag or Cu or their complexes with tartrate, oxalate, CN ⁻ , SCN ⁻ , pyrophosphate, EDTA, or nitrilotriacetic acid are used as Ag or Cu compds.				
IT	4189-44-0 , Thiourea dioxide				
RL:	USES (Uses)				
	(in synthetic fiber treatment for elec. cond.)				
RN	4189-44-0 HCAPLUS				
CN	Thiourea, S,S-dioxide (9CI) (CA INDEX NAME)				



*this can exist as
formamide sulfine and as
amino amino sulphuric acid.*

NH₂-C(=S)-NH₂

L23 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2001 ACS

AN 1987:638464 HCAPLUS

DN 107:238464

TI Retardation of the photoyellowing of untreated wool and wool treated with fluorescent whitening agents by the action of reducing agents

AU Davidson, R. Stephen; Ismail, Gulam M.; Lewis, David M.

CS Dep. Chem., City Univ., London, EC1V 0HB, UK

SO J. Soc. Dyers Colour. (1987), 103(9), 308-13

CODEN: JSDCAA; ISSN: 0037-9859

DT Journal

LA English

AB The application of thiourea dioxide (I) to wool promoted photobleaching of the fiber, but the white produced was not **permanent** to further irradiation in water. I also reduced the yellow photodegradation products of o,o'-biphenol (a model for dityrosine). Although I did not prevent the photodestruction of Photine-HV (a com. fluorescent whitening agent), it reduced any color products formed. Other reducing agents such as Na benzenesulfinate, thiourea, HCHO, and Rongalit C were less effective as photobleaching agents than was I. Combination of HCHO with other reducing agents gave synergistic effects.

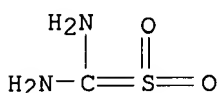
IT **4189-44-0**, Thiourea dioxide

RL: USES (Uses)

(photoyellowing retardation by, of untreated wool and wool treated with fluorescent brighteners)

RN 4189-44-0 HCAPLUS

CN Thiourea, S,S-dioxide (9CI) (CA INDEX NAME)



L23 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2001 ACS

AN 1987:35067 HCAPLUS

DN 106:35067

TI Liming hides and skins

IN Olip, Vinzenz

PA Oesterreichische Chemische Werke G.m.b.H., Austria

SO Eur. Pat. Appl., 9 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 197918	A1	19861015	EP 1986-890089	19860402
	EP 197918	B1	19871125		
	R: DE, FR, GB, IT				
	AT 8501005	A	19860515	AT 1985-1005	19850403
	AT 381952	B	19861229		
PRAI	AT 1985-1005		19850403		

AB Liming of hides and skins is carried out in the presence of 0.1-3.0 wt.% thiourea dioxide (I, based on the wt. of softened hide or skin) and optionally in the presence of surfactants and/or N-contg. bases (e.g., Me₂NH). Heavy softened cattle hide 100 kg was unhaired with 2.5 kg Ca(OH)₂ and 2 kg I in 200 L water at pH 12.2 for 24 h at room temp.; after liming, residual **hair** as well as connective tissue could be removed.

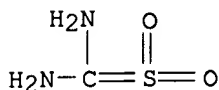
IT **4189-44-0**, Thiourea dioxide

RL: USES (Uses)

(liming additive, for unhairing of hides and skins)

RN 4189-44-0 HCAPLUS

CN Thiourea, S,S-dioxide (9CI) (CA INDEX NAME)



L23 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2001 ACS

AN 1983:100514 HCAPLUS

DN 98:100514

TI High-performance liquid chromatography of urea and related compounds with post-column derivatization

AU Kawase, Jiro; Ueno, Hideko; Nakae, Atsuo; Tsuji, Kazuro

CS Tochigi Res. Lab., Kao Soap Co. Ltd., Tochigi, Japan

SO J. Chromatogr. (1982), 252, 209-16

CODEN: JOCRAM; ISSN: 0021-9673

DT Journal

LA English

AB Urea and related compds. such as allantoin, N-methylurea, 1,1-dimethylurea, 1,3-dimethylurea, thiourea and thiourea dioxide can be detd. within 30 min by high-performance liq. chromatog. with a detection limit for each of <0.2 .mu.g. The post-column detection system consists of a 3-reagent delivery system. Urea and related compds. from an anal. column are converted into the corresponding N-chloramines with hypochlorite and the excess of hypochlorite is selectively destroyed with nitrite. The N-chloramines formed are reacted with iodide to form triiodide, which is monitored at 370 nm. These compds. were sepd. with a strong cation exchanger (TSK-Gel LS-211, 12 .mu.m), in the K+, Na+, and Li+ forms, packed in a glass column (400 .times. 8 mm inner diam.). Useful differences in retention and selectivity occur with these ionic forms and different column temps.; the Li+ form of the resin at 50.degree. is optimal with deionized H2O as the eluent. The method was applied successfully to the detn. of the above compds., which are widely used as additives in drugs, chelating agents, anticaking agents and bleaching agents.

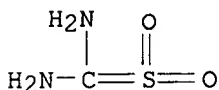
IT 4189-44-0

RL: ANT (Analyte); ANST (Analytical study)

(detn. of, by high-performance liq. chromatog. with post-column derivatization for spectrophotometric detection)

RN 4189-44-0 HCAPLUS

CN Thiourea, S,S-dioxide (9CI) (CA INDEX NAME)



L23 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2001 ACS

AN 1974:6779 HCAPLUS

DN 80:6779
 TI Dyeing of **hair**
 IN Schrader, Dieter
 PA Therachemie Chemisch Therapeutische G.m.b.H.
 SO Ger. Offen., 16 pp. Addn. to Ger. Offen. 2,119,231 (CA 78; 75789h).
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2207682	A1	19730830	DE 1972-2207682	19720218
	DE 2207682	C3	19801211		
	AT 320160	B	19750127	AT 1972-2142	19720314
	NL 7203769	A	19721024	NL 1972-3769	19720321
	NL 173917	B	19831101		
	NL 173917	C	19840402		
	SE 388773	B	19761018	SE 1972-3634	19720321
	CA 985174	A1	19760309	CA 1972-139933	19720418
	GB 1334636	A	19731024	GB 1972-18060	19720419
	CH 561065	A	19750430	CH 1972-5844	19720420
PRAI	DE 1971-2119231		19710421		
	DE 1972-2207682		19720218		

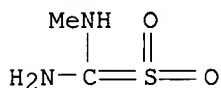
AB Human **hair** was dyed uniform deep shades by oxidative dyes contg. reducing agents, complexing agents, and MeNHC(:SO₂)NHR [R = H (I) or Me]. Thus, 0.001 mole 1-phenyl-3-(dimethylamino)-4-amino-5-pyrazolinone and 0.001 mole 1-naphthol in 20 parts NH₃-contg. H₂O was mixed with I 0.1, Na₂SO₃ 1, and diethylenetriaminepentaacetic acid 0.2 part, 50 parts 10:26:34 parts C16-18 fatty alc.-Na lauryl sulfate-H₂O was added, the pH adjusted to 9.5, and H₂O added to give 100 parts almost white cream. H₂O₂ (6%, 50 g) was added to 50 g above compn. and applied to gray **hair** to give, after .apprx.10 min, deep blue shades.

IT 50486-56-1 50486-57-2

RL: BIOL (Biological study)
 (hair dyes)

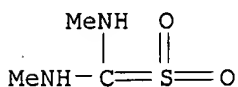
RN 50486-56-1 HCAPLUS

CN Thiourea, methyl-, S,S-dioxide (9CI) (CA INDEX NAME)



RN 50486-57-2 HCAPLUS

CN Thiourea, N,N'-dimethyl-, S,S-dioxide (9CI) (CA INDEX NAME)

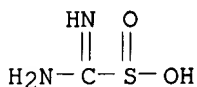


AN 1973:75789 HCAPLUS
 DN 78:75789
 TI Agents and method for dyeing human hair
 IN Schrader, Dieter
 PA Therachemie Chemische Therapeutische G.m.b.H.
 SO Ger. Offen., 12 pp.
 CODEN: GWXXBX

DT Patent
 LA German

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2119231	A	19721026	DE 1971-2119231	19710421
	DE 2119231	B2	19790517		
	AT 320160	B	19750127	AT 1972-2142	19720314
	NL 7203769	A	19721024	NL 1972-3769	19720321
	NL 173917	B	19831101		
	NL 173917	C	19840402		
	SE 388773	B	19761018	SE 1972-3634	19720321
	CA 985174	A1	19760309	CA 1972-139933	19720418
	BR 7202385	A0	19730830	BR 1972-2385	19720419
	GB 1334636	A	19731024	GB 1972-18060	19720419
	CH 561065	A	19750430	CH 1972-5844	19720420
	FR 2134003	A5	19721201	FR 1972-14141	19720421
	FR 2134003	B1	19741018		
	ZA 7202716	A	19730131	ZA 1972-2716	19720421
PRAI	DE 1971-2119231		19710421		
	DE 1972-2207682		19720218		
AB	The use of oxidn. dyes for hair coloring is complicated by uncertain conditions during development. Procedures using oxidn. dyes with customary additives for hair coloring are improved by treating the hair at 10-40.degree. with solns., emulsions, or cream contg. thiourea dioxide (I) in combination with a reducing agent and an org. complexing medium. The reducing agent may be HSCH2CO2H or a H2O-sol. salt and the org. complexing agent EDTA or a H2O-sol. salt. I and the reducing agent are present in the preps. in amts. of 0.03-2.0 and 0.1-2.0 wt. % resp.				
IT	1758-73-2				
	RL: BIOL (Biological study) (antioxidants, for oxidn. dyes for hair)				
RN	1758-73-2 HCAPLUS				
CN	Methanesulfinic acid, aminoimino- (8CI, 9CI) (CA INDEX NAME)				



L23 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2001 ACS
 AN 1973:20128 HCAPLUS
 DN 78:20128
 TI Two-component hair tonics
 IN Giede, Karl; Flemming, Peter
 PA Therachemie Chemisch Therapeutische G.m.b.H.

Qazi 09/714,663

SO Ger. Offen., 11 pp.

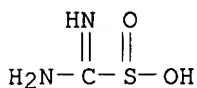
CODEN: GWXXBX

DT Patent

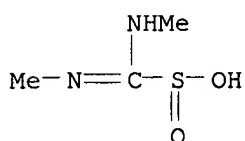
LA German

FAN.CNT 1

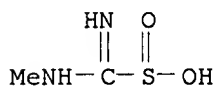
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2111697	A	19720928	DE 1971-2111697	19710311
AB	Two-component hair tonics of increased activity by development of heat on mixing, consisted of a component (A) contg. a reducing agent and a component (B) contg. an oxidizing agent. Thus, a two-component hair tonic consisted of A (contg. cetyl alc. 2.0, mono- and diglyceride mixt. of C16-18 fatty acids 8.0, wool fat alc. 1.5, paraffin oil 1.5, cetyltrimethylammonium chloride 4.0, 40:1 moles adduct of ethylene oxide to castor oil 1.0, thiourea 3.5, perfume oil 0.3, lecithin 0.5, and H2O 77.7 parts) and of B (contg. 13.3 parts 30% H2O2 and 86.7 parts H2O). On mixing A and B in a ratio of 1:1 a pos. heat effect of 25.degree. was obtained.				
IT	1758-73-2 RL: BIOL (Biological study) (hair prepns., contg. hydrogen peroxide, self-heating)				
RN	1758-73-2 HCAPLUS				
CN	Methanesulfinic acid, aminoimino- (8CI, 9CI) (CA INDEX NAME)				



L101 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2001 ACS
 AN 2001:475176 CAPLUS
 TI Thiourea oxide structure from AM1 method data
 AU Davtyan, K. A.; Makarov, S. V.; Kudrik, E. V.
 CS Ivanov. Gos. Khim.-Tekhnol. Univ., Ivanovo, Russia
 SO Izv. Vyssh. Uchebn. Zaved., Khim. Khim. Tekhnol. (2001), 44(2), 22-24
 CODEN: IVUKAR; ISSN: 0579-2991
 PB Ivanovskii Gosudarstvennyi Khimiko-Tekhnologicheskii Universitet
 DT Journal
 LA Russian
 AB Electronic and geometric structure of thiourea oxides (TOTU), N-Me and N,N-di-Me thiourea dioxides were studied by semiempiric quantum-chem. AM1 method. Considered is the effect of the solvent on TOTU structure when a reacting mol. is approaching.
 IT **55152-72-2 108249-21-4**
 RL: PRP (Properties); RCT (Reactant)
 (thiourea oxide structure from AM1 method data)
 RN 55152-72-2 CAPLUS
 CN Methanesulfinic acid, (methylamino)(methylimino)- (9CI) (CA INDEX NAME)



RN 108249-21-4 CAPLUS
 CN Methanesulfinic acid, imino(methylamino)- (6CI, 9CI) (CA INDEX NAME)



L101 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2001 ACS
 AN 2000:141106 CAPLUS
 DN 132:303459
 TI Evidence for the Involvement of N-Methylthiourea, a Ring Cleavage Metabolite, in the Hepatotoxicity of Methimazole in Glutathione-Depleted Mice: Structure-Toxicity and Metabolic Studies
 AU Mizutani, Tamio; Yoshida, Kaoru; Murakami, Mihoko; Shirai, Mutsuko; Kawazoe, Sadahiro
 CS Department of Food Sciences and Nutritional Health, Kyoto Prefectural University, Shimogamo, Kyoto, 606-8522, Japan
 SO Chem. Res. Toxicol. (2000), 13(3), 170-176
 CODEN: CRTOEC; ISSN: 0893-228X
 PB American Chemical Society
 DT Journal
 LA English
 AB In mice depleted of GSH by treatment with buthionine sulfoximine (BSO), methimazole (2-mercapto-1-methylimidazole, MMI) causes liver injury characterized by centrilobular necrosis of hepatocytes and an increase in

serum alanine transaminase (SALT) activity. MMI requires metabolic activation by both P 450 monooxygenase and flavin-contg. monooxygenase (FMO) before it produces the hepatotoxicity. MMI and its analogs were examd. for the ability to increase SALT activity in GSH-depleted mice. Satn. of the C-4,5 double bond in MMI resulted in a complete loss of hepatotoxicity. Similarly, ring fusion of a benzene nucleus to the C-4,5 double bond, forming 2-mercapto-1-methylbenzimidazole, abolished the toxic potency. As for MMI, 2-mercapto-1,4,5-trimethylimidazole, and 2-mercapto-1-methyl-4,5-di-n-propylimidazole, the toxic potency decreased with the increasing bulk of the 4- and 5-alkyl substituents. Furthermore, methylation of the thiol group of MMI totally reduced its toxicity. These structural requirements and the known toxicity of thiono-sulfur compds. led us to the hypothesis that MMI would undergo epoxidn. of the C-4,5 double bond by P 450 enzymes and, after being hydrolyzed, the resulting epoxide would be then decompd. to form N-methylthiourea, a proximate toxicant. Before N-methylthiourea would produce toxicity, it would be further biotransformed to its S-oxidized metabolites mainly by FMO. Evidence for this hypothesis was provided by the facts that N-methylthiourea and glyoxal as the accompanying fragment were identified as urinary metabolites in mice treated with MMI and that N-methylthiourea caused a marked increase in SALT activity when administered to mice in combination with BSO.

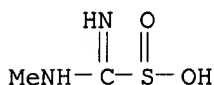
IT 108249-21-4

RL: MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)

(methimazole analogs hepatotoxicity in glutathione depletion:
structure-toxicity and metab.)

RN 108249-21-4 CAPLUS

CN Methanesulfinic acid, imino(methylamino)- (6CI, 9CI) (CA INDEX NAME)



RE.CNT 35

RE

- (2) Bartalena, L; Drug Saf 1996, V15, P53 CAPLUS
 - (4) Cashman, J; Chem Res Toxicol 1995, V8, P165 CAPLUS
 - (5) Cooper, D; N Engl J Med 1984, V311, P1353 CAPLUS
 - (7) Decker, C; Chem Res Toxicol 1992, V5, P726 CAPLUS
 - (8) Doerge, D; J Labelled Compd Radiopharm 1988, V25, P985 CAPLUS
- ALL CITATIONS AVAILABLE IN THE RE FORMAT

L101 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2001 ACS

AN 2000:106083 CAPLUS

DN 132:278843

TI Reactive oxygen species in aerobic decomposition of thiourea dioxides

AU Svarovsky, Serge A.; Simoyi, Reuben H.; Makarov, Sergei V.

CS Department of Chemistry, West Virginia University, Morgantown, WV,
26506-6045, USA

SO Dalton (2000), (4), 511-514

CODEN: DALTFG

PB Royal Society of Chemistry

DT Journal

LA English

AB Thiourea dioxides decomp. in air-satd. alk. solns. to give dithionite, S2O42-. Kinetics of decompn. of aminoiminomethanesulfinic acid (AIMSA), methylaminoiminomethanesulfinic acid (MAIMSA) and dimethylaminoiminomethanesulfinic acid (DMAIMSA) were studied in alk. solns. under aerobic and anaerobic conditions. No dithionite was formed in strictly anaerobic conditions. Dithionite, however, was formed in the presence of KO2 and H2O2 under anaerobic conditions. The rate of decompn. was fastest for DMAIMSA and slowest for MAIMSA. The proposed mechanism involves the initial formation of the dioxosulfate(2-) ion, SO22-, through the heterolytic cleavage of the C-S bond. The dioxosulfate(2-) ion then reacts with dioxygen to give reactive O species: superoxide, peroxide and the hydroxyl radical. The expected dismutation of superoxide is important only in weakly alk. solns. of pH <10. It is suggested, for the 1st time, that the reactive O species and the S leaving groups may be responsible for the toxicity obsd. in most thioureas.

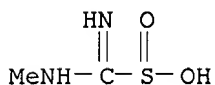
IT 108249-21-4

RL: ADV (Adverse effect, including toxicity); FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)

(reactive oxygen species in aerobic decompn. of thiourea dioxides)

RN 108249-21-4 CAPLUS

CN Methanesulfinic acid, imino(methylamino)- (6CI, 9CI) (CA INDEX NAME)



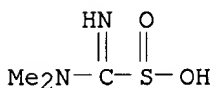
IT 263894-01-5

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); BIOL (Biological study); PROC (Process)

(reactive oxygen species in aerobic decompn. of thiourea dioxides)

RN 263894-01-5 CAPLUS

CN Methanesulfinic acid, (dimethylamino)imino- (9CI) (CA INDEX NAME)



RE.CNT 32

RE

(3) Bertini, I; Advances in Inorganic Chemistry 1998, V45, P127 CAPLUS

(4) Bielski, B; J Phys Chem 1977, V81, P1048 CAPLUS

(5) Boyd, M; Drug Metab Dispos 1976, V4, P314 CAPLUS

(8) Cooper, D; N Engl J Med 1984, V311, P1353 CAPLUS

(9) Creutz, C; Inorg Chem 1974, V13, P2041 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

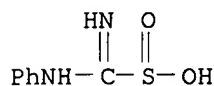
L101 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2001 ACS

AN 1997:99131 CAPLUS

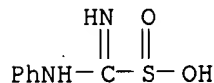
DN 126:123897

TI Voltammetric characteristics of sulfur-containing reducing agents

AU Murav'ev, O. N.; Makarov, S. V.; Bazanov, M. I.; Budanov, V. V.
 CS Ivanov. Gos. Khim.-Tekhnol. Akad., Ivanovo, Russia
 SO Zh. Obshch. Khim. (1996), 66(9), 1416-1419
 CODEN: ZOKHA4; ISSN: 0044-460X
 PB Nauka
 DT Journal
 LA Russian
 AB The cyclic voltammetry method was used to confirm the similarity of the intermediates from the decompn. of Na dithionite, Na hydroxymethanesulfinic acid and dioxides of thiourea (thiourea dioxide and phenylthiourea dioxide). The redox potentials were detd. for electrode processes with the participation of intermediates (the ion radical SO₂·- and the dithionite ion S₂O₄²⁻). The cleavage of the C-S bond in dioxides of thiourea has a homolytic nature.
 IT **14451-43-5**, Phenylthiourea dioxide
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process)
 (redox potential and cyclic voltammetric characteristics of)
 RN 14451-43-5 CAPLUS
 CN Methanesulfinic acid, imino(phenylamino)- (9CI) (CA INDEX NAME)

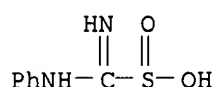


L101 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2001 ACS
 AN 1996:444447 CAPLUS
 DN 125:124925
 TI Acid-base properties of thio- and phenylthiourea dioxides
 AU Evdokimova, S. M.; Aleksandrova, A. N.; Makarov, S. V.; Budanov, V. V.
 CS Ivanov. Gos. Khim.-Tekhnol. Akad., Ivanovo, Russia
 SO Izv. Vyssh. Uchebn. Zaved., Khim. Khim. Tekhnol. (1995), 38(6), 27-31
 CODEN: IVUKAR; ISSN: 0579-2991
 DT Journal
 LA Russian
 AB The dissocn. consts. (pKa) of thio- and phenylthiourea dioxides were detd. in aq. solns. and in water-DMSO at different temps. and solvent compns.
 IT **14451-43-5**, Phenylthiourea dioxide
 RL: PRP (Properties); RCT (Reactant)
 (acid-base equil. of thio- and phenylthiourea dioxides in aq. solns. and in water-DMSO)
 RN 14451-43-5 CAPLUS
 CN Methanesulfinic acid, imino(phenylamino)- (9CI) (CA INDEX NAME)

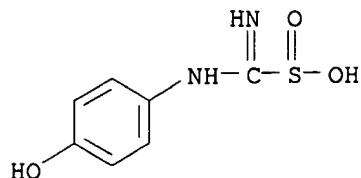


L101 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2001 ACS
 AN 1995:373817 CAPLUS
 DN 122:329554

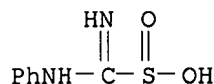
TI Potentiometric determination of thiourea dioxides in water-organic media
 AU Evdokimova, S. M.; Aleksandrova, A. N.; Makarov, S. B.; Budanov, V. V.
 CS Ivanovo Chem. Eng. Acad., Ivanovo, 153000, Russia
 SO J. Anal. Chem. (Transl. of Zh. Anal. Khim.) (1995), 50(1), 69-71
 CODEN: JACTE2; ISSN: 1061-9348
 DT Journal
 LA English
 AB The feasibility of detg. thiourea dioxide and its analogs by acid-base potentiometric titrn. in an water-DMSO medium was demonstrated. The relative std. deviation for 0.1M solns. was .ltoreq.0.69 relative %. For 0.01M and 0.001M solns., a relative std. deviation of 1.2 and 1.4 relative % was found, resp.
 IT **14451-43-5**, Phenylthiourea dioxide
 RL: ANT (Analyte); ANST (Analytical study)
 (potentiometric detn. in water-org. media)
 RN 14451-43-5 CAPLUS
 CN Methanesulfinic acid, imino(phenylamino)- (9CI) (CA INDEX NAME)



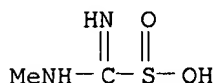
L101 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2001 ACS
 AN 1993:212577 CAPLUS
 DN 118:212577
 TI Biological properties of amidinium sulfinic and sulfonic acid derivatives: inhibition of glycolytic enzymes of Trypanosoma brucei and protective effect on cell growth
 AU Willson, M.; Perie, J. J.; Malecaze, F.; Oppendoes, F.; Callens, M.
 CS Groupe Chim. Org. Biol., Univ. Paul-Sabatier, Toulouse, 31062, Fr.
 SO Eur. J. Med. Chem. (1992), 27(8), 799-808
 CODEN: EJMCA5; ISSN: 0223-5234
 DT Journal
 LA English
 AB The activity of the title compds., e.g., 4-HOC6H4NHC+(NH2)SO_n⁻ and (4-PhCH2C6H4NH)2C+SO_n⁻ (n = 2, 3), prepd. from thioureas, such as 4-HOC6H4NHCSNH2, was investigated on two biol. systems: cultures of trypanosome via glycolytic enzyme inhibition, and on retinal epithelium cells. In both cases, these compds. exhibit a significant activity, in some cases more selective than that of the drug suramin, with a lower toxicity. The effect of these compds., which exist as neutral and zwitterionic forms in the case of sulfinic derivs. and only as zwitterionic in the case of sulfonic derivs., can be understood via their action on clusters of pos. charges which are present at the surface of the proteins involved in the processes: glycolytic enzymes of the trypanosome in the first part and basic fibroblast growth factor in the second.
 IT **146886-04-6P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn., cell growth-inhibiting, and protozoacidal activity of)
 RN 146886-04-6 CAPLUS
 CN Methanesulfinic acid, [(4-hydroxyphenyl)amino]imino- (9CI) (CA INDEX NAME)



L101 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2001 ACS
 AN 1992:58536 CAPLUS
 DN 116:58536
 TI Stability and reactivity of methyl- and phenylthiourea dioxides in aqueous solution
 AU Lekhimena, K.; Makarov, S. V.; Budanov, V. V.
 CS Ivanov. Khim.-Tekhnol. Inst., Ivanovo, USSR
 SO Izv. Vyssh. Uchebn. Zaved., Khim. Khim. Tekhnol. (1991), 34(8), 122-3
 CODEN: IVUKAR; ISSN: 0579-2991
 DT Journal
 LA Russian
 AB The substituent dependence of stability and reducing activity of thiourea dioxides [i.e., stability increased in the series thiourea dioxide < phenylthiourea dioxide < methylthiourea dioxide, and reducing activity for Fe(edta)- in the opposite order] suggested that thiourea dioxide decompn. products were the active reducing species. The degree of ESR detection of SO₂.bul.- was consistent with this reactivity order.
 IT **14451-43-5**, Phenylthiourea dioxide **108249-21-4**
 RL: PRP (Properties)
 (stability of, and redn. with, of iron complex, kinetics of)
 RN 14451-43-5 CAPLUS
 CN Methanesulfinic acid, imino(phenylamino)- (9CI) (CA INDEX NAME)



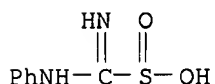
RN 108249-21-4 CAPLUS
 CN Methanesulfinic acid, imino(methylamino)- (6CI, 9CI) (CA INDEX NAME)



L101 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2001 ACS
 AN 1988:422611 CAPLUS
 DN 109:22611
 TI Chemistry of aminoiminomethanesulfinic and -sulfonic acids related to the toxicity of thioureas
 AU Miller, Audrey E.; Bischoff, Judith J.; Pae, Kathy
 CS Dep. Chem., Univ. Connecticut, Storrs, CT, 06268, USA
 SO Chem. Res. Toxicol. (1988), 1(3), 169-74
 CODEN: CRTOEC

DT Journal
 LA English
 AB The reactions of aminoiminomethanesulfonic acid, phenylaminoiminomethanesulfonic acid (I) and N,N'-diphenylaminoiminomethanesulfonic acid (II) in aq. media at pH 7.4, 10, and 13-14 were investigated. At neutral pH hydrolysis to the corresponding urea was the major pathway for all 3 compds. At higher pH I reacted to give phenylcyanamide in nearly quant. yield, whereas II gave diphenylcarbodiimide which reacted further to give N,N'-diphenylurea. At pH 10 aminoiminomethanesulfonic acid reacted with itself, eventually giving N-cyanoguanidine, whereas at pH 13-14, elimination to cyanamide predominated. The reactions of glycine with the aminoiminomethanesulfonic acids gave guanylated acetic acids as products. The rates of these nucleophilic substitutions of the sulfonic acid group of the aminoiminomethanesulfonic acids by the amino group of glycine decreased in the order aminoiminomethanesulfonic acid > phenylaminoiminomethanesulfonic acid > (2-methylphenyl)aminoiminomethanesulfonic acid > (2,6-dimethylphenyl)aminoiminomethanesulfonic acid. Higher relative rates of substitution of the aminoiminomethanesulfonic acids appear to be related to higher relative toxicities of the corresponding thioureas.

IT **14451-43-5P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (prepn. and reactions of, in aq. media)
 RN 14451-43-5 CAPLUS
 CN Methanesulfinic acid, imino(phenylamino)- (9CI) (CA INDEX NAME)



L101 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2001 ACS
 AN 1980:17839 CAPLUS
 DN 92:17839
 TI S-Oxygenation of N-substituted thioureas catalyzed by the pig liver microsomal FAD-containing monooxygenase
 AU Poulsen, L. L.; Hyslop, R. M.; Ziegler, D. M.
 CS Dep. Chem., Univ. Texas, Austin, TX, 78712, USA
 SO Arch. Biochem. Biophys. (1979), 198(1), 78-88
 CODEN: ABBIA4; ISSN: 0003-9861
 DT Journal
 LA English
 AB The microsomal FAD-contg. monooxygenase (EC 1.14.13.8, dimethylaniline monooxygenase), purified to homogeneity from hog liver, catalyzed NADPH- and O-dependent S-oxygenation of phenylthiourea, ethylenethiourea, thiocarbanilide, N-methylthiourea, and thiourea to their corresponding formamidine sulfinic acids. The sulfinic acids are formed by sequential enzymic oxidn. of the thioureas through intermediate sulfenic acids. The reaction sequence was established by sepg. intermediate and final oxygenated metabolites of phenylthiourea and ethylenethiourea. The sulfenic and sulfinic acids of these 8 thioureas, produced enzymically, were chromatog. and spectrally identical with chem. synthesized ref. compds. Phenylformamidine and ethyleneformamidine sulfinic acids were slowly converted to their sulfonic acids on prolonged incubation. Whereas N-substituted formamidine sulfinic acids oxidize spontaneously to

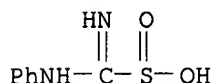
formamidine sulfonic acids at 37.degree., the further oxidn. of ethyleneformamidine sulfinic acid may be, at least in part, enzyme catalyzed. The purified monooxygenase also catalyzed rapid oxygenation of mercaptoimidazoles to the corresponding imidazole sulfinic acids. The instability of S-oxygenated mercaptoimidazoles prevented their isolation and pos. identification, but anal. of kinetic data obtained with sulfenic acid trapping agents suggested that these compds. are oxygenated by the same reaction sequence established for N-substituted thioureas. The NADPH- and O-dependent oxidn. of thiocarbamates and of 2-mercaptoimidazoles catalyzed by hog or hamster liver microsomes correlated with dimethylaniline N-oxidase activity and appeared completely independent from cytochrome P-450. The S-oxidn. of thiourea and its derivs. was not inhibited by n-octylamine, a known inhibitor of cytochrome P-450 dependent oxygenations. Furthermore, differential thermal inactivation of the flavin-contg. monooxygenase totally abolished phenylthiourea S-oxidase activity of hamster liver microsomes.

IT 14451-43-5

RL: FORM (Formation, nonpreparative)
(formation of, by dimethylaniline monooxygenase reaction with phenylthiourea)

RN 14451-43-5 CAPLUS

CN Methanesulfinic acid, imino(phenylamino)- (9CI) (CA INDEX NAME)



L101 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2001 ACS

AN 1975:155197 CAPLUS

DN 82:155197

TI Synthesis of formamidinesulfinic acids and formamidines

AU Havel, James J.; Kluttz, Robert Q.

CS Dep. Chem., Rice Univ., Houston, Tex., USA

SO Synth. Commun. (1974), 4(6), 389-93

CODEN: SYNCAV

DT Journal

LA English

AB Oxidn. of RNHCSNHR (R = H, Me, Et, Bu, Ph, cyclohexyl, PhCH₂) at 5-10.degree. gave 80-90% RNHC(SO₂-):N+HR, which when refluxed in HOAc gave 50-95% RNHCH:N+HR OAc-.

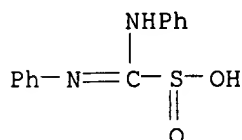
IT 14451-44-6P 55152-72-2P 55152-73-3P

55152-74-4P 55152-76-6P

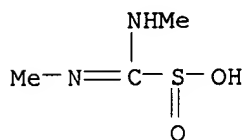
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and pyrrolysis of)

RN 14451-44-6 CAPLUS

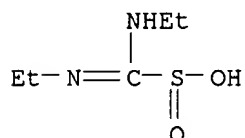
CN Methanesulfinic acid, (phenylamino)(phenylimino)- (9CI) (CA INDEX NAME)



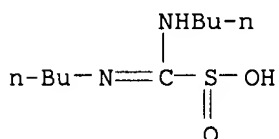
RN 55152-72-2 CAPLUS
CN Methanesulfinic acid, (methylamino)(methylimino)- (9CI) (CA INDEX NAME)



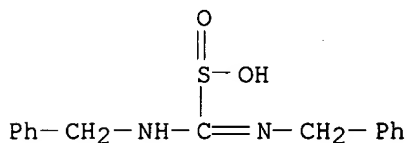
RN 55152-73-3 CAPLUS
CN Methanesulfinic acid, (ethylamino)(ethylimino)- (9CI) (CA INDEX NAME)



RN 55152-74-4 CAPLUS
CN Methanesulfinic acid, (butylamino)(butylimino)- (6CI, 9CI) (CA INDEX NAME)

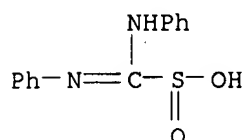


RN 55152-76-6 CAPLUS
CN Methanesulfinic acid, [(phenylmethyl)amino][(phenylmethyl)imino]- (9CI) (CA INDEX NAME)

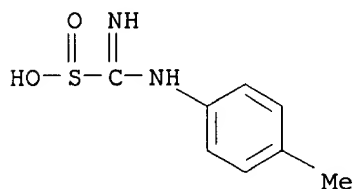


L101 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2001 ACS
AN 1972:513325 CAPLUS
DN 77:113325
TI Spectrochemical study of aminoiminomethanesulfinic acid and related N,N'-derivatives
AU De Filippo, D.; Ponticelli, G.; Trogu, E. F.; Lai, A.
CS Ist. Chim. Policattedra, Univ. Cagliari, Cagliari, Italy
SO J. Chem. Soc., Perkin Trans. 2 (1972), (11), 1500-2
CODEN: JCPKBH
DT Journal

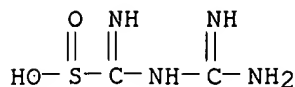
LA English
 AB $\text{H}_2\text{NC}(:\text{NH})\text{SO}_2\text{H}$, $\text{PhNHC}(:\text{NPh})\text{SO}_2\text{H}$, $p\text{-MeC}_6\text{H}_4\text{NHC}(:\text{NH})\text{SO}_2\text{H}$, and $o\text{-MeC}_6\text{H}_4\text{NHC}(:\text{N-C}_6\text{H}_4\text{Me-o})\text{SO}_2\text{H}$ (I) were prepd. by oxidn. at 0-6.degree. of the corresponding thiourea in dioxane with 33% H_2O_2 using Na_4MoO_5 as catalyst. Strong H bonds were obsd. by ir spectroscopy; force consts., bond orders, and OSO angles were detd. Assignment of all PMR resonances allowed full characterization; a conformational study of I and its Na salt in $\text{CF}_3\text{CO}_2\text{D-CDCl}_3$ was accomplished.
 IT **14451-44-6P 38716-58-4P**
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (prepn. and spectra of)
 RN 14451-44-6 CAPLUS
 CN Methanesulfinic acid, (phenylamino)(phenylimino)- (9CI) (CA INDEX NAME)



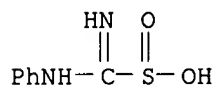
RN 38716-58-4 CAPLUS
 CN Methanesulfinic acid, imino[(4-methylphenyl)amino]- (9CI) (CA INDEX NAME)



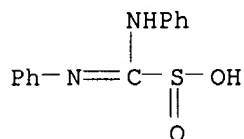
L101 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2001 ACS
 AN 1972:24628 CAPLUS
 DN 76:24628
 TI N-Guanylfornamidinesulfinic acid
 AU Kondrashova, M. F.; Yarovenko, E. Ya.
 CS USSR
 SO Metody Poluch. Khim. Reaktivov Prep. (1969), No. 20, 56-7
 From: Ref. Zh., Khim. 1971, Abstr. No. 1Zh211
 DT Journal
 LA Russian
 AB Oxidn. of $\text{NH}_2\text{C}(:\text{NH})\text{NHC}(\text{S})\text{NH}_2 \cdot (\text{COOH})_2$ (I) with H_2O_2 at 60.degree. at pH 2-3 gave 51% $\text{NH}_2\text{C}(:\text{NH})\text{N}:\text{C}(\text{SO}_2\text{H})\text{NH}_2 \cdot \text{H}_2\text{O}$.
 IT **34619-81-3P**
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)
 RN 34619-81-3 CAPLUS
 CN Methanesulfinic acid, [(aminoiminomethyl)amino]imino- (9CI) (CA INDEX NAME)



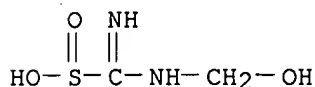
L101 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2001 ACS
 AN 1970:434993 CAPLUS
 DN 73:34993
 TI Synthesis and properties of some alkyl(aryl)-substituted
 formamidinesulfinic acids
 AU Yarovenko, E. Ya.; Lastovskii, R. P.
 CS Vses. Nauch.-Issled. Inst. Khim. Reaktivov Osobo Chist. Khim. Veshch.,
 Moscow, USSR
 SO Zh. Org. Khim. (1970), 6(5), 947-9
 CODEN: ZORKAE
 DT Journal
 LA Russian
 AB The oxidn. of RNHCSNHR1 with H2O2 in the presence of Na molybdate gave
 RNHC(:NR1)SO2H (I) (R and R1 given): H, CH2OH; H, Ph; H, o-HOC6H4; H,
 o-MeOC6H4; Ph, Ph. The potentiometric titrn. of I gave their approx.
 redox potentials. The presence of substituents in I lowers its ability as
 a reducing agent.
 IT **14451-43-5P 14451-44-6P 27395-34-2P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 RN 14451-43-5 CAPLUS
 CN Methanesulfinic acid, imino(phenylamino)- (9CI) (CA INDEX NAME)



RN 14451-44-6 CAPLUS
 CN Methanesulfinic acid, (phenylamino)(phenylimino)- (9CI) (CA INDEX NAME)



RN 27395-34-2 CAPLUS
 CN Methanesulfinic acid, [(hydroxymethyl)amino]imino- (8CI) (CA INDEX NAME)

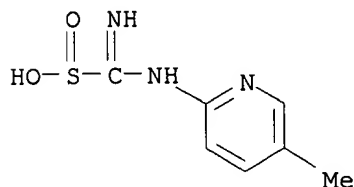


L101 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2001 ACS

Qazi 09/714,663

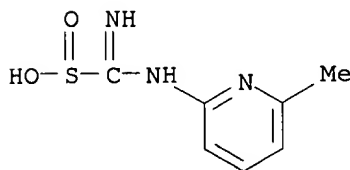
AN 1969:87599 CAPLUS
DN 70:87599
TI N-Pyridyl- or N-quinolylformamidinesulfinic acids
IN Shibanov, G. N.; Zhigaleva, T. M.
PA North-Caucasus Scientific-Research Institute of Phytopathology
SO U.S.S.R.
From: Izobret., Prom. Obraztsy, Tovarnye Znaki 1968, 45(33), 41.
CODEN: URXXAF
DT Patent
LA Russian
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 229521		19681023	SU	19670708
AB	Title compds. are prepd. by treating N-pyridyl(or N-quinolyl)thiourea with H2O2 in the presence of Na molybdate as a catalyst at 0-5.degree. in an aq. medium.				
IT	22462-65-3P 22462-66-4P 22462-67-5P 22462-68-6P 22462-88-0P RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)				
RN	22462-65-3 CAPLUS				
CN	Methanesulfinic acid, imino[(5-methyl-2-pyridyl)amino]-, monoammonium salt (8CI) (CA INDEX NAME)				



● NH₃

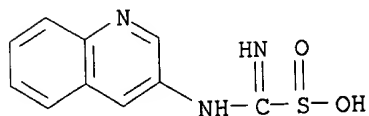
RN 22462-66-4 CAPLUS
CN Methanesulfinic acid, imino[(6-methyl-2-pyridyl)amino]-, monoammonium salt
(8CI) (CA INDEX NAME)



NH₃

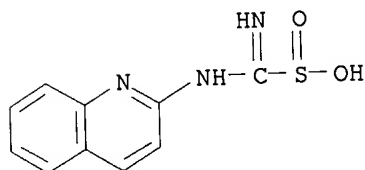
Qazi 09/714,663

RN 22462-67-5 CAPLUS
CN Methanesulfinic acid, imino(3-quinolylamino)-, monoammonium salt (8CI)
(CA INDEX NAME)



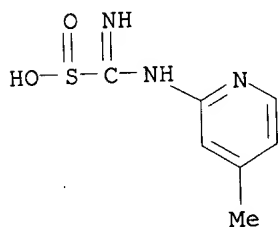
● NH3

RN 22462-68-6 CAPLUS
CN Methanesulfinic acid, imino(2-quinolylamino)-, monoammonium salt (8CI)
(CA INDEX NAME)



● NH3

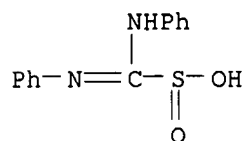
RN 22462-88-0 CAPLUS
CN Methanesulfinic acid, imino[(4-methyl-2-pyridyl)amino]-, monoammonium salt
(8CI) (CA INDEX NAME)



● NH3

L101 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2001 ACS
AN 1968:49238 CAPLUS
DN 68:49238
TI N,N'-Diphenylformamidinesulfinic acid dihydrate
AU Globus, R. L.; Lastovskii, R. P.; Yarovenko, E. Ya.; Medvedeva, S. P.

SO Metody Poluch. Khim. Reakt. Prep. (1967), No. 15, 75-6
CODEN: MPRPAT
DT Journal
LA Russian
AB H2O2 (28.2%) (6 ml.) was added dropwise to a vigorously stirred soln. of 5 g. N,N'-diphenylthiourea and 0.025 g. Na molybdenate in 80 ml. dioxane at 15.degree.. The reaction mixt. was cooled, the ppt. filtered and dried at 60.degree. to give 61.6% PhN:C(NHPh)SO2H.2H2O, m. 183-4.degree..
IT **14451-44-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 14451-44-6 CAPLUS
CN Methanesulfinic acid, (phenylamino)(phenylimino)- (9CI) (CA INDEX NAME)



INVENTOR(S): Amon, Robert
SOURCE: Brit., 4 pp.
CODEN: BRXXAA
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1201601		19700812	GB	19660502

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS

AB One soln. (A) consisted of 30.0 g. poly(oxyethylene) sorbitan monolaurate, 10.0 g. polyethylene glycol alkyl allyl ether, 5.0 g. H₂NC(:NH)SO₂H, 5.0 g. water, and 10.0 g. 28% aq. NH₃. The other soln. (B) consisted of 5.0 g. citric acid and 100.0 g. water. When a mixt. of 1 part soln. A and 2 parts soln. B was applied to **hair**, wool, textiles, paper, and leather, dyes were reduced in a short time at room temp.

ACCESSION NUMBER: 1964:68856 CAPLUS
DOCUMENT NUMBER: 60:68856
ORIGINAL REFERENCE NO.: 60:12173f-g
TITLE: Decolorizing agent containing iminoaminomethanesulfinic acid
INVENTOR(S): Tao, Yukai
PATENT ASSIGNEE(S): Toshiyuki Akabori and Senji Murakami
SOURCE: 2 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 38005150		19630430	JP	19600926

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS

AB A **hair** permanent wave compn. was obtained by combining iminoaminomethanesulfinic acid (I) and disulfide compds. as a stabilizer at pH 7-10. The soln. contained I 8, cystine 1, 7.5% NaOH aq. soln. 45, water 50, liquid paraffin 2, and poly(oxyethylene) oleate 0.5 g.

ACCESSION NUMBER: 1963:440940 CAPLUS
DOCUMENT NUMBER: 59:40940
ORIGINAL REFERENCE NO.: 59:7316c
TITLE: **Hair** permanent wave solution
INVENTOR(S): Akabori, Toshiyuki; Murakami, Senji
SOURCE: 2 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 38000950		19630212	JP	19601004
DE 1198491			DE	

L102 ANSWER 1 OF 4 CAOLD COPYRIGHT 2001 ACS

AN CA65:3751f CAOLD

TI N- or N,N'-aryl substituted formamidinesulfinic acids

AU Globus, R. L.; Lastovskii, R. P.; Yarovenko, E. Ya.; Medvedeva, S. P.

DT Patent

TI N-or N,N'-aryl substituted formamidinesulfinic acids

PA All-Union Scientific-Research Institute of Chemical Reagents and Pure Chemical Substances

DT Patent

PATENT NO.	KIND	DATE
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PI SU 178803

IT 7545-18-8 13455-85-1 **14451-43-5** **14451-44-6**

L102 ANSWER 2 OF 4 CAOLD COPYRIGHT 2001 ACS

AN CA57:15257d CAOLD

TI aminoiminomethanesulfinic acid and derivs. as tumor inhibitors

AU Rao, Koppaka V.

PA Pfizer, Chas., & Co., Inc.

DT Patent

PATENT NO.	KIND	DATE
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PI US 3051626 1962

IT **90324-78-0** 93281-79-9

L102 ANSWER 3 OF 4 CAOLD COPYRIGHT 2001 ACS

AN CA54:22119f CAOLD

TI photographic emulsions sensitized with iminoaminomethanesulfinic acids

PA Gevaert Photo-Production N. V.

DT Patent

PATENT NO.	KIND	DATE
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PI BE 547323

IT 36333-00-3 **55152-74-4** **98026-08-5** 98069-81-9
98337-00-9 **98548-10-8** **108249-21-4**

L102 ANSWER 4 OF 4 CAOLD COPYRIGHT 2001 ACS

AN CA54:17128e CAOLD

TI radiographic film

AU Blake, Ralph K.; Alles, F. P.

PA Du Pont de Nemours, E. I., & Co.

DT Patent

PATENT NO.	KIND	DATE
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PI DE 1036051

IT 36333-00-3 **55152-74-4** **98026-08-5** 98069-81-9
98337-00-9 **98337-86-1** 98550-72-2 **108249-21-4**
118835-32-8

L106 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2001 ACS

AN 1966:420406 HCAPLUS

DN 65:20406

OREF 65:3751f-g

TI N- or N,N'-aryl substituted formamidinesulfinic acids

IN Globus, R. L.; Lastovskii, R. P.; Yarovenko, E. Ya.; Medvedeva, S. P.

PA All-Union Scientific-Research Institute of Chemical Reagents and Pure Chemical Substances

SO From: Izobret., Prom. Obraztsy, Tovarnye Znaki 43(4), 17(1966)..

DT Patent

LA Unavailable

IC C07C

CC 33 (Aliphatic Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 178803		19660203	SU	19650120
AB	The title compds. are prepd. by treating N- or N,N'-aryl substituted thiourea with H ₂ O ₂ at 0-15.degree. in the presence of Na ₂ MoO ₄ in a solvent medium. Subsequently, the product is sepd. by filtration.				

L106 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2001 ACS

AN 1966:420405 HCAPLUS

DN 65:20405

OREF 65:3751d-f

TI Methyl-.beta.-hydroxy sulfoxides

IN Anderson, Donald J.

PA Chevron Research Co.

SO 3 pp.

DT Patent

LA Unavailable

NCL 260607000

CC 33 (Aliphatic Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3247258		19660419	US	19611025
AB	The title compds. of general formula MeS(O)CH ₂ CH(OH)(CH ₂) _n Me (I) are useful as nonionic detergents and lime soap dispersants. MeSH (70 g.) and O introduced at a steady rate to 168.3 g. 1-dodecene at 95.degree. gave 37 g. I (n = 9), m. 80.2-4.1.degree. (Me ₂ CO). CF ₃ CO ₃ H [from 220 ml. (CF ₃ CO) ₂ O and 35 ml. 90% H ₂ O ₂ in 250 ml. CHCl ₃ at 110.degree.] added to 112 g. 1-octene (II) in 500 ml. CHCl ₃ and 400 g. Na ₂ CO ₃ at -5.degree. to 0.degree. gave a soln. contg. 67.7% 1,2-epoxyoctane, 8.4% II, and 23.9% CHCl ₃ . This soln. (125 g.) treated with 40 g. MeSNa in 1 l. EtOH at 10.degree., and neutralized gave 80 ml. MeSCH ₂ CH(OH)(CH ₂) ₅ Me (III), b0.1 68-76.degree., n _D 20 1.4721. HOAc (50 ml.) and 11.4 g. 30% H ₂ O ₂ treated with 18 g. III in 400 ml. HOAc and 150 ml. CH ₂ Cl ₂ at 0-5.degree., and neutralized gave 10.7 g. I (n = 5), m. 37.2-40.8.degree. (petroleum ether). MeSH (48 g.) and O introduced at a steady rate to 224 g. 1-hexadecene and 10 ml. 2% azadiisobutyronitrile in Me ₂ CO at 90.degree. gave 32 g. I (n = 13), m. 72.8-8.1.degree.. Ir spectral data of I given.				

L106 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2001 ACS

AN 1962:476441 HCAPLUS

DN 57:76441

OREF 57:15257d-e,15258a

TI Aminoiminomethanesulfinic acid and derivatives as tumor inhibitors

IN Rao, Koppaka V.

PA Chas. Pfizer & Co., Inc.

SO 3 pp.

DT Patent

LA Unavailable

CC 39 (Pharmaceuticals)

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3051626		19620828	US	19590701

AB Aminoiminomethanesulfinic acid (I) was effective intraperitoneally and orally for inhibition of adenocarcinoma CA-755 and sarcomas 180 and HS-1 in white mice, with acceptable survival rates and toxicities.

L106 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2001 ACS

AN 1962:476440 HCAPLUS

DN 57:76440

OREF 57:15257b-d

TI Saitomycin, an antitumor substance

IN Sumiki, Yusuke; Umezawa, Hamao; Yonehara, Hiroshi; Tanaka, Nobuo; Sakagami, Yoshio

PA Japan Antibiotic Research Assocr.

DT Patent

LA Unavailable

CC 39 (Pharmaceuticals)

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 37000955		19620426	JP	19591104

AB Blastocidin S (10 g.) is suspended in 100 ml. 0.01-0.3N alk. soln., kept at 20-40.degree. for 2-14 days, the soln. is then adjusted to pH 1.0, and passed through Amberlite IR-410. The resulting soln. is passed through Amberlite IRC-50, the resin is washed with H2O, eluted with 1N NH4OH, and the eluate is concd. To the concd. soln., EtOH is added to give 6 g. saitomycin, m. 236-7.degree. (decompn.), presumably C15H24O6N6, [.alpha.]21D +137.degree., neg. to ninhydrin reaction, sol. in H2O, dil. alc., dil. Me2CO, AcOH, insol. in Et2O, acetates, petr. ether, and C6H6, picrate m. 163-4.degree.. Saitomycin exhibits anti-tumor activity.

L106 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2001 ACS

AN 1960:116319 HCAPLUS

DN 54:116319

OREF 54:22119e-i,22120a

TI Sensitizing photographic emulsions with iminoaminomethanesulfinic acids

PA Gevaert Photo-Producten N. V.

DT Patent

LA Unavailable

CC 5 (Photography)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	BE 547323		19560816	BE	

AB The sensitivity of Ag halide emulsions with or without other sensitizers is enhanced by addn. of derivs. of NH2C(:NH)SO2H (I) or (NH2)2C:SO2, preferably in an amt. of 0.05-1% in relation to the amt. of Ag. Thus, a washed negative gelatin emulsion (A) (av. grain size 0.8 .mu.) contg. 5% AgI and 95% AgBr was ripened at 45.degree.. To 1 part (B), 20 mg.

CH₂:CHCH₂NHC(:NH)SO₂H (II) and to another part (C), 0.6 mg. I per 100 g. Ag were added at the start of the ripening. A pan sensitizer and other usual components were added. The relative sensitivity of A, B, and C was 100, 180, and 190, resp. A washed photographic emulsion (av. grain size 0.4 .mu.) contg. 36% AgCl and 64% AgBr was ripened at 45.degree.. Chrome alum, KBr, saponin, etc., were also added. At the start of the ripening, 200 mg. II was added to 1 part. The relative sensitivity was 100 and 190, resp. A washed AgBr emulsion (av. size: 0.1 .mu.) for positive cine film was ripened at 54.degree.. At the start of the ripening, 400 mg. II was added to one part and 10 mg. I to another. The relative sensitivity was 100, 210, and 200, resp. A washed, fine-grained Ag(BrI) emulsion prepd. from an inert gelatin was ripened at 50.degree. optionally in the presence of a S sensitizer until an optimum sensitivity was reached: sensitizer, another sensitizer, the relative sensitivity, and the gamma are given: none, none, 22, 0.50; 8 cc. Na₂S₂O₃ 0.1% (III), none, 100, 1.10; III, 0.02 cc. I, 160, 1.10; III, 0.2 cc. I, 240, 1.25; III, 2 cc. II, 200, 1.10; III, 6 cc. II, 250, 1.30; III, 20 cc. II, 250, 1.35; none, 0.02 cc. I, 30, 0.55; none, 0.2 cc. I, 60, 1.05; none, 2 cc. II, 50, 1.05; none, 6 cc. II, 60, 1.10; none, 20 cc. II, 65, 1.20; none, 12 cc. 2-ClC₆H₄NHC(:NH)SO₂H, 40, 0.70; none, 12 cc. (morpholino)(imino)methanesulfinic acid, 65, 1.20; none, 1.2 cc. MeNHC(:NH)SO₂H, 60, 1.05; none, 12 cc. C₃H₇NHC(:NH)SO₂H, 65, 1.15; none, 12 cc. CH₂:CHCH₂NHC(:NCH₂CH:CH₂)SO₂H, 65, 1.20; none, 12 cc. BuNHC(:NBu)SO₂H, 65, 1.20; none, 12 cc. (2-pyridylamino)(methylimino)methanesulfinic acid, 60, 1.10; none, 12 cc. CH₂[CH₂CH₂NHC(:NH)SO₂H]₂, 65, 1.15.

L106 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2001 ACS

AN 1960:90546 HCAPLUS

DN 54:90546

OREF 54:17128e-f

TI Radiographic film

IN Blake, Ralph K.; Alles, Francis P.

PA E. I. Du Pont de Nemours & Co.

DT Patent

LA Unavailable

NCL 57B

CC 5 (Photography)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1036051		19580807	DE	
AB	See U.S. 2,887,379 (CA 53, 15834c).				

L106 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2001 ACS

AN 1960:90545 HCAPLUS

DN 54:90545

OREF 54:17128d-e

TI Photographic emulsions with increased light sensitivity

IN Roosens, Laurent P.; Faelens, Paul A.

PA Gevaert Photo-Producten N.V.

DT Patent

LA Unavailable

NCL 57B

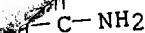
CC 5 (Photography)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI DE 1020864 19571212 DE
AB The sensitivity of Ag halide emulsions sensitized with S sensitizers and Au, Pt, or Pd compds. can be increased by addn. of (imino)(amino)methanesulfinic acid compds. (I). From thiourea or its N-substituted derivs. and H₂O₂ and (or) NaMnO₄, I are easily obtained. Addn. to the emulsion takes place at any time during the emulsion production in quantities from 0.05 to 1% of the Ag amt.

07/714, 663



L101 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2001 ACS

AN 1970:434993 CAPLUS

DN 73:34993

TI Synthesis and properties of some alkyl(aryl)-substituted formamidesulfinic acids

AU Yarovenko, E. Ya.; Lastovskii, R. P.

CS Vses. Nauch.-Issled. Inst. Khim. Reaktivov Osobo Chist. Khim. Veshch., Moscow, USSR

SO Zh. Org. Khim. (1970), 6(5), 947-9

CODEN: ZORKAE

DT Journal

LA Russian

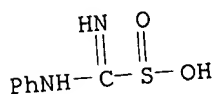
AB The oxidn. of RNHCSNHR1 with H2O2 in the presence of Na molybdate gave RNHC(:NR1)SO2H (I) (R and R1 given): H, CH2OH; H, Ph; H, o-HOC6H4; H, o-MeOC6H4; Ph, Ph. The potentiometric titrn. of I gave their approx. redox potentials. The presence of substituents in I lowers its ability as a reducing agent.

IT 14451-43-5P 14451-44-6P 27395-34-2P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

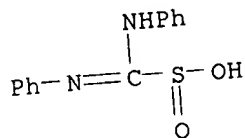
✓ RN 14451-43-5 CAPLUS

CN Methanesulfinic acid, imino(phenylamino)- (9CI) (CA INDEX NAME)



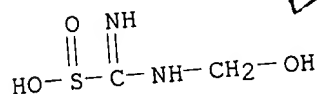
✓ RN 14451-44-6 CAPLUS

CN Methanesulfinic acid, (phenylamino)(phenylimino)- (9CI) (CA INDEX NAME)



RN 27395-34-2 CAPLUS

CN Methanesulfinic acid, [(hydroxymethyl)amino]imino- (8CI) (CA INDEX NAME)



L101 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2001 ACS

Searched by Paul Schulwitz

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NEWS	3	Apr 09 BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS	4	Apr 09 ZDB will be removed from STN
NEWS	5	Apr 19 US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS	6	Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS	7	Apr 22 BIOSIS Gene Names now available in TOXCENTER
NEWS	8	Apr 22 Federal Research in Progress (FEDRIP) now available
NEWS	9	Jun 03 New e-mail delivery for search results now available
NEWS	10	Jun 10 MEDLINE Reload
NEWS	11	Jun 10 PCTFULL has been reloaded
NEWS	12	Jul 02 FOREGE no longer contains STANDARDS file segment
NEWS	13	Jul 22 USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS	14	Jul 29 Enhanced polymer searching in REGISTRY
NEWS	15	Jul 30 NETFIRST to be removed from STN
NEWS	16	Aug 08 CANCERLIT reload
NEWS	17	Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN
NEWS	18	Aug 08 NTIS has been reloaded and enhanced
NEWS	19	Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS	20	Aug 19 IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS	21	Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded
NEWS	22	Aug 26 Sequence searching in REGISTRY enhanced
NEWS	23	Sep 03 JAPIO has been reloaded and enhanced
NEWS	24	Sep 16 Experimental properties added to the REGISTRY file
NEWS	25	Sep 16 Indexing added to some pre-1967 records in CA/CAPLUS
NEWS	26	Sep 16 CA Section Thesaurus available in CAPLUS and CA
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NEWS	29	Oct 24 BEILSTEIN adds new search fields
NEWS	30	Oct 24 Nutraceuticals International (NUTRACEUT) now available on STN
NEWS	31	Oct 25 MEDLINE SDI run of October 8, 2002 on STN
NEWS EXPRESS	October 14 CURRENT WINDOWS VERSION IS V6.01, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002	
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in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> s 14451-43-5/rn

L2 1 14451-43-5/RN

=> d 12

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS

RN 14451-43-5 REGISTRY

CN Methanesulfinic acid, imino(phenylamino)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Methanesulfinic acid, anilinoimino- (7CI, 8CI)

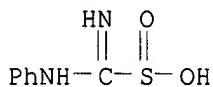
OTHER NAMES:

CN Phenylthiourea dioxide

FS 3D CONCORD

MF C7 H8 N2 O2 S

LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9 REFERENCES IN FILE CA (1962 TO DATE)

9 REFERENCES IN FILE CAPLUS (1962 TO DATE)

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

Susan Hanley please

Access DB# _____

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sabita Qay Examiner #: 74141 Date: 9/15/01
Art Unit: 1616 Phone Number 305 Serial Number: 09/714,663
Mail Box and Bldg/Room Location: 2D19, CM1 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

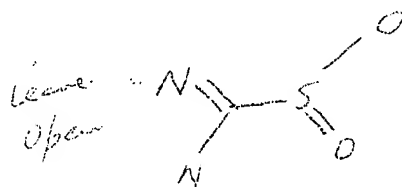
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Composition for the permanent deformation of hair
Inventors (please provide full names): comprising at least one formaldehyde
Sulfonate and
NATHALIE GARNIER

Earliest Priority Filing Date: 11/17/00

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

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Susan Hanley
Technical Info. Specialist
CM1 12C14 Tel: 305-4053

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